

What is Claimed is:

1. A programmable logic resource comprising:
 - an input/output (I/O) buffer that receives data from circuitry external to the
 - 5 programmable logic resource and generates a plurality of outputs;
 - a crossbar switch that receives the plurality of outputs from the I/O buffer and generates a plurality of outputs, wherein the crossbar switch is
 - 10 configured to send at least one of the plurality of outputs from the I/O buffer to a corresponding one of the plurality of outputs of the crossbar switch;
 - an intellectual property block that receives the plurality of outputs of the crossbar
 - 15 switch for processing.
2. The programmable logic resource of claim 1 wherein the I/O buffer:
 - receives the data at I/O ports located along the periphery of the programmable logic resource;
 - 5 and
 - decodes the data to generate the plurality of outputs.
3. The programmable logic resource of claim 1 comprising a package in which the programmable logic resource is mounted.
4. The programmable logic resource of claim 3 wherein the package has pins through which the circuitry external to the programmable logic resource sends data, wherein the data is further routed from
5 the pins to the I/O buffer.

5. A digital processing system comprising:
processing circuitry;
a memory coupled to the processing
circuitry; and
5 a programmable logic resource as defined
in claim 1 coupled to the processing circuitry and the
memory.
6. A printed circuit board on which is
mounted a programmable logic resource as defined in
claim 5.
7. The printed circuit board defined in
claim 6 further comprising:
a memory mounted on the printed circuit
board and coupled to the programmable logic resource.
8. The printed circuit board defined in
claim 6 further comprising:
processing circuitry mounted on the
printed circuit board and coupled to the programmable
5 logic resource.
9. A printed circuit board comprising:
processing circuitry mounted on the
printed circuit board;
a memory mounted on the printed circuit
5 board and coupled to the processing circuitry; and
a package having a plurality of pins
mounted on the printed circuit board at fixed pin
locations and coupled to the processing circuitry and
the memory at the fixed pin locations, the package
10 having embedded therein a programmable logic resource
having a plurality of input/output (I/O) ports located

along the periphery of the programmable logic resource
and coupled to the plurality of pins, wherein the
programmable logic resource comprises circuitry
15 configured to send data from at least one of the
plurality of I/O ports to a corresponding one of a
plurality of data ports in an intellectual property
block for processing.

10. The printed circuit board of claim 9
wherein at least one of the plurality of pins is
coupled to a nearest available one of the plurality of
I/O ports.

11. The printed circuit board of claim 9
wherein the programmable logic resource further
comprises an I/O buffer that receives the data from the
plurality of I/O ports and decodes the data for output
5 to the circuitry.

12. The printed circuit board of claim 9
wherein the circuitry is a configurable crossbar
switch.

13. The printed circuit board of claim 9
wherein the circuitry is a dynamically adjustable
crossbar switch.

14. A method of improving connectivity
between signaling input/output (I/O) and an
intellectual property block in a programmable logic
resource comprising:

5 driving a signal to a fixed pin location
on a circuit board upon which a package, having
embedded therein the programmable logic resource, is
mounted;

routing the signal from the fixed pin
10 location to a nearest available I/O port located along
the periphery of the programmable logic resource; and
configuring a crossbar switch to route
the signal from the nearest available I/O port to a
corresponding data port in the intellectual property
15 block for processing.

15. The method of claim 14 wherein driving
the signal comprises sending the signal as output from
one of processing circuitry and a memory.

16. The method of claim 14 wherein the
signal is a low voltage differential signal.

17. The method of claim 14 further
comprising decoding the signal received from the
nearest available I/O port for output to the crossbar
switch.

18. The method of claim 14 further
comprising configuring the crossbar switch during
initial configuration of the programmable logic
resource.

19. The method of claim 14 further
comprising configuring the crossbar switch during
reconfiguration of all or part of the programmable
logic resource.

20. The method of claim 14 further
comprising dynamically adjusting the crossbar switch
while data is processing in the programmable logic
resource.